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limitations." M.P.E.P. §2142. None of APA, Nishimura et al., nor Doblar et al., even when considered in combination, teach or suggest all limitations of claims 67, 87-88, and 92.

Claims 67 and 87 recite a signal transmission system comprising, *inter alia*, "a first transmission member having a first length and an impedance less than 100 ohms" (emphasis added). Claim 88 recites a signal transmission system comprising, *inter alia*, a "first transmission member including a first transmission medium having an impedance less than 100 ohms" (emphasis added). Claim 92 recites a method of synchronizing first and second operations of respective first and second circuits comprising, *inter alia*, "a first transmission member, said first transmission member having a first signal propagation factor ..., said first signal propagation factor related to an impedance less than 100 ohms of said first transmission member" (emphasis added). An impedance less than 100 ohms has the benefit of transmitting well defined signals with well defined delays. The Office Action admits that none of APA, Nishimura et al., nor Doblar et al. disclose these limitations. Office Action p. 3. The assertions of characteristics "notoriously well known in the art" have no support in the Office Action.

Further, the combination recited in claims 67 and 87 of a first transmission member having an impedance less than 100 ohms and an impedance adjusting component coupled to a second transmission member is not taught or suggested by the cited references. Similarly, claim 88 recites a first transmission member having an impedance less than 100 ohms and a second transmission member with a changeable second impedance, which is not taught or suggested by the cited references.

Nor do Nishimura et al. or Doblar et al. teach or suggest how to modify APA to obtain the claimed invention. There is therefore no *prima facie* case of obviousness.

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Obviousness is based on factual findings. "Whether a patent claim is obvious under section 103 depends upon the answer to several factual questions and how the factual answers meld into the legal conclusion of obviousness *vel non*." *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351 (Fed. Cir. 2001). The four underlying factual inquiries are: (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the pertinent art; and (4) secondary considerations, if any, of non-obviousness. *Graham v. John Deere Co.*, 393 U.S. 1, 17-18 (1966).

There is no motivation to combine all of these references to obtain the invention of claims 67, 87-88, and 92. Motivation or suggestion to combine or modify prior art references "must be clear and particular, and it must be supported by actual evidence." *Teleflex, Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 1334 (Fed. Cir. 2002). Because the "genius of invention is often a combination of known elements which in hindsight seems preordained," the Federal Circuit requires a "rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references." *McGinley*, 262 F.3d at 1351. Yet there is no teaching or suggestion within any of the references that provide a motivation to combine them.

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990). Thus, a showing of an obvious combination requires more than just an amalgam of references, each of which provides one feature of the claimed invention.

The Office Action has done no more than cite a group of references, each of which provides one feature of the claimed invention, and allege that their combination renders the invention obvious. However, without the benefit of hindsight, there would

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have been no motivation to combine these references and the Office Action has failed to provide proof of any such motivation.

Since Nishimura et al., Doblar et al., and APA do not teach or suggest all of the limitations of claims 67, 87-88, and 92, and are also not properly combinable absent motivation to do so, claims 67, 87-88, and 92 are not obvious over the cited references. Claims 68-82 and 86 depend from claim 67 and should be allowable along with claim 67 and for other reasons. Claim 88 depends from claim 89 and is patentable at least for the reasons mentioned above. Claim 98 depends from independent claim 67 and should be allowable along with claim 67 and for other reasons. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claims 67-82, 86-89 and 98 be withdrawn.

Claims 92-97 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura et al. in view of Doblar et al. This rejection is respectfully traversed. Neither Nishimura et al. nor Doblar et al., even when considered in combination, teach or suggest all limitations of claim 92.

Claim 92 recites a method of synchronizing first and second operations of respective first and second circuits comprising, *inter alia*, "a first transmission member, said first transmission member having a first signal propagation factor ..., said first signal propagation factor related to an impedance less than 100 ohms of said first transmission member" (emphasis added). An impedance less than 100 ohms has the benefit of transmitting well defined signals with well defined delays. The Office Action admits that neither Nishimura et al. nor Doblar et al. disclose this limitation. Office Action p. 7. The assertions of characteristics "notoriously well known in the art" have no support in the Office Action.

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Nor does Doblar et al. teach or suggest how to modify Nishimura et al. to obtain the claimed invention. There is therefore no *prima facie* case of obviousness. Obviousness is based on factual findings. "Whether a patent claim is obvious under section 103 depends upon the answer to several factual questions and how the factual answers meld into the legal conclusion of obviousness *vel non*." *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351 (Fed. Cir. 2001). The four underlying factual inquiries are: (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the pertinent art; and (4) secondary considerations, if any, of non-obviousness. *Graham v. John Deere Co.*, 393 U.S. 1, 17-18 (1966).

There is no motivation to combine all of these references to obtain the invention of claim 92. Motivation or suggestion to combine or modify prior art references "must be clear and particular, and it must be supported by actual evidence." *Teleflex, Inc. v. Ficos North America Corp.*, 299 F.3d 1313, 1334 (Fed. Cir. 2002). Because the "genius of invention is often a combination of known elements which in hindsight seems preordained," the Federal Circuit requires a "rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references." *McGinley*, 262, F.3d at 1351. Yet there is no teaching or suggestion within either of the references that provide a motivation to combine them.

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990). Thus, a showing of an obvious combination requires more than just an amalgam of references, each of which provides one feature of the claimed invention.

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The Office Action has done no more than cite a pair of references and an assertion, each of which provides one feature of the claimed invention, and allege that their combination renders the invention obvious. However, without the benefit of hindsight, there would have been no motivation to combine these references and the Office Action has failed to provide proof of any such motivation.

Since Nishimura et al. and Doblar et al. do not teach or suggest all of the limitations of claim 92, and are also not properly combinable absent motivation to do so, claim 92 and dependent claims 93-97 are not obvious over the cited references. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claims 92-97 be withdrawn.

In view of the above, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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